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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/066,236	02/02/2002	Terence Chee Sung Chang	85447.000090	2772

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EXAMINER
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WILLIAMS, KEVIN D

ART UNIT	PAPER NUMBER
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2854

DATE MAILED: 11/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

10/066,236

Applicant(s)

CHANG ET AL.

Examiner

Kevin D. Williams

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NW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 November 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

1. In response to applicant's telephone inquiry of 11/4/2003 regarding the last Office action, the following corrective action is taken.

A complete copy of the last Office Action is enclosed.

The period for reply of 3 MONTHS set in said Office Action is restarted to begin with the mailing date of this letter.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the illuminator must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claims 1-7 and 14-18 are objected to because of the following informalities:

In claim 1, line 8, it seems that "chose" should be --chosen--.

In claim 2, line 2, it seems that "chose" should be --chosen--.

In claim 5, line 2, it seems that "clanging" should be --changing--.

In claim 7, line 4, it seems that "closes" should be --closest--.

In claim 14, line 4, it seems that "a", first occurrence, should be --at--.

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In claim 14, line 4, it seems that "a", second occurrence, should be --an--.

In claim 15, line 10, it seems that --for-- should be inserted after "means."

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 7 and 15-21 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 1 recites "comparing a chosen feature of the calibration print to the distance that the print is moved" and claim 7 recites "the chosen feature being the fiducial mark closest to the cut edge." Claims 1 also recites "deriving a input signal representative of the difference between the chosen feature and the distance that the calibration print is moved." The specification does not describe comparing the fiducial mark closest to the cut edge to the distance that the print is moved and deriving an input signal of the difference between the mark closest to the cut edge and the distance that the calibration print is moved.

Claim 15 recites "scanning means for comparing the actual distance the print is moved by the adjustable drive" and claim 19 recites "a scanner for...measuring a

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feature of the calibration print.” The specification does not describe a scanner that is capable of comparing the actual distance the print is moved by the adjustable drive or measuring a feature of the calibration print. The specification discloses that the scanner only detects fiducial marks. The specification discloses that the controller actually compares the actual distance the print is moved by the adjustable drive and measures a feature of the calibration print. See paragraph 0025.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-16, 18, 19, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks (US 4,960,336) in view of Diesch (US 4,163,405).

With respect to claims 1-7, Brooks teaches a method for calibrating at least one adjustable drive of an image printer comprising setting the adjustable drive of the printer to a first setting (col. 4, lines 40-62), printing a calibration print with the image printer, moving the calibration print with the adjustable drive 22 of the printer, comparing a chosen feature (distance B) of the calibration print to the distance that the print is moved by the adjustable drive, deriving an input signal representative of the difference between the chosen feature and the distance that the calibration print is moved by the adjustable drive (col. 9, lines 40-53), correcting the adjustable drive responsive to the input signal

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(col. 10, lines 15-30), the chosen feature being the print length, the adjustable drive being a stepper motor 22, setting the adjustable drive comprising setting the linear distance that the stepper motor moves the calibration print with each step (col. 4, lines 45-51), correcting the adjustable drive comprises changing the distance a stepper motor advances the calibration print for printing the calibration print (col. 9, line 54 to col. 10, line 20), and a pair a spaced fiducial marks, a plurality of staggered fiducial marks (edge of sheet 14A and test symbol 12A) and the chosen feature being the distance between the fiducial marks.

Brooks does not teach a cutter, cutting the calibration print, the chosen feature being the cut length, cutting the calibration print to provide a cut edge adjacent one of the fiducial marks and the chosen feature being the fiducial mark closest to the cut edge.

Diesch teaches a cutter 58, cutting a calibration print, a chosen feature being the cut length, cutting the calibration print to provide a cut edge adjacent one of the fiducial marks and the chosen feature being the fiducial mark closest to the cut edge (col. 5, line 59 to col. 6, line 27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brooks to have a cutter as taught by Diesch and to use an adjustable drive as taught by Brooks to determine a desired cut location, in order to make the printer more versatile by providing a cutter in the same device.

With respect to claims 8-14, Brooks teaches a method for calibrating at least one component of a printer comprising setting the adjustable component of the printer to a

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first setting (col. 4, lines 40-62), printing a calibration print with the image printer, scanning 64 the calibration print and measuring a feature (distance between edge of sheet 14A and test symbol 12A) of the calibration print that is affected by the setting of the adjustable component, adjusting the component in response to the measurement and setting a stored value in a controller operating the printer (col. 10, lines 15-30), setting the adjustable component comprises setting the linear distance the calibration print is moved with each step of a stepper motor (col. 4, lines 40-62), scanning the print involves measuring the print length (edge 14A to test symbol 12A) of the calibration print and adjusting the component in response to the measured print length, the calibration print having at least one fiducial mark (12A) and the scanning measures the intensity of the fiducial mark and adjusting the component comprises setting a fiducial sensor to produce a predetermined output (col. 5, line 60 to col. 6, line 22), the adjustable component comprises an adjustable drive 22 for moving the calibration print, the calibration print comprises first and second fiducial marks (14A,12A) and said adjusting comprises adjusting the drive so the linear distance the drive moves the print corresponds to the distance between the fiducial marks, the adjustable component comprises an adjustable drive for advancing the calibration print a preselected distance with respect to a printer, and the calibration print comprises a plurality of fiducial marks (14A,12A) spaced at predetermined distances from an edge of the calibration print.

Brooks does not teach cutting the calibration print, measuring the cut length, and causing the cutter to cut the print at a predetermined one of the fiducial marks.

Diesch teaches cutting a calibration print, measuring a cut length, and causing a cutter 58 to cut the print at a predetermined one of the fiducial marks (col. 5, line 59 to col. 6, line 27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brooks to have a cutter as taught by Diesch and to use an adjustable drive as taught by Brooks to determine a desired cut location, in order to make the printer more versatile by providing a cutter in the same device.

With respect to claims 15, 16, 18, 19, and 21, Brooks teaches an apparatus for calibrating at least one component of a printer comprising an adjustable drive for moving a calibration print produced by a printer, the adjustable drive being set to a first preset setting for moving the print a predetermined distance (col. 4, lines 40-62), scanning means 64 for comparing the actual distance the print is moved by the adjustable drive set at the first setting with a known distance (distance B) on the calibration print and deriving an input signal responsive to the difference (col. 9, lines 40-53) between the known distance on the calibration print and the actual distance the print is moved by the adjustable drive, an illuminator for illuminating the fiducial mark (col. 5, line 65 to col. 6, line 22), correcting means for adjusting the first preset setting responsive to the input signal and correcting the adjustable drive so the predetermined distance matches the known distance (col. 10, lines 15-30), the adjustable drive being a stepper motor 22 and the first preset setting comprises the linear distance that the stepper motor moves the print with each step (col. 4, lines 40-62), at least one fiducial mark 12A, a drive roller 28 for moving the calibration print the predetermined distance



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corresponding to the preset setting, a scanning means 64 deriving the input signal responsive to the difference between the actual distance between the edge 14A and the test symbol 12A and the predetermined distance, a printer having an adjustable component preset to a first setting (distance print is moved to print test symbol 12A), a drive means 22 for moving a calibration print produced by the image printer, a scanner 64 for scanning the calibration print as it passes through the printer and measuring a feature (distance between 14A and 12A) of the calibration print affected by the setting of the adjustable component, adjusting means acting responsive to the measurement to change the preset setting of the adjustable component (col. 10, lines 15-30), the calibration print includes a pair of fiducial marks (14A,12A) spaced a known distance (B) apart, the adjustable component is a stepper motor drive 22 for moving the calibration print through the printer, the preset setting is the linear distance the stepper motor moves the calibration print with each step (col. 4, lines 40-62), the sensor 64 being operable to measure the distance between the spaced fiducial marks as the calibration print is moved through the printer by the stepper motor, the adjusting means acting responsive to the measurement to change the preset setting to adjust the linear distance the stepper motor moves the calibration print with each step so the linear distance coincides with the known distance between the fiducial marks.

Brooks does not teach a cutter, and a knife for making a cut across the calibration print at the start and at the end of the predetermined distance.

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Diesch teaches a cutter and a knife 58 for making a cut across the calibration print at the start and at the end of the predetermined distance (col. 5, line 59 to col. 6, line 27).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brooks to have a cutter as taught by Diesch and to use an adjustable drive as taught by Brooks to determine a desired cut location, in order to make the printer more versatile by providing a cutter in the same device.

7. Claims 17 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brooks in view of Diesch as applied to claims 1-16, 18, 19, and 21 above, and further in view of Tabor (US 6,018,687).

Brooks in view of Diesch does not teach means for adjusting the intensity of the illuminator responsive to a voltage output of the scanner responding to the fiducial mark being different than a preset voltage, the adjustable component being the intensity of the illumination of the fiducial mark, the first setting is a preset voltage setting related to a desired intensity of the illumination of the fiducial mark, adjusting means acting responsive to a measurement to the actual fiducial mark illumination to adjust the preset voltage and thereby increase or decrease the illumination of the fiducial mark to produce the desired intensity.

Tabor teaches means for adjusting (col. 4, lines 12-20) the intensity of an illuminator responsive to a voltage output of a scanner responding to the fiducial mark being different than a preset voltage, an adjustable component being the intensity of the illumination of the fiducial mark (col. 4, lines 12-20), the first setting being a preset

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voltage setting related to a desired intensity of the illumination of the fiducial mark, adjusting means (col. 4, lines 12-20) acting responsive to a measurement to the actual fiducial mark illumination to adjust the preset voltage and thereby increase or decrease the illumination of the fiducial mark to produce the desired intensity.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Brooks in view of Diesch to have the adjustable illuminator as taught by Tabor, in order to accurately adjust the sensitivity of the sensors so that the print is properly cut.

### ***Response to Arguments***

8. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

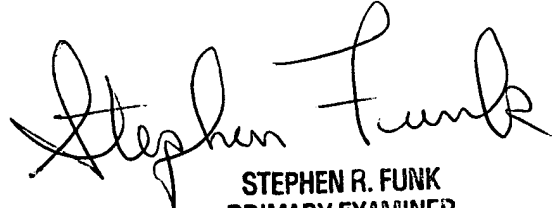
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin D. Williams whose telephone number is (703) 305-3036. The examiner can normally be reached on Monday - Friday, 8:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (703) 305-6619. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

KDW  
October 17, 2003



STEPHEN R. FUNK  
PRIMARY EXAMINER